BUSINESS BUDGETING

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Budgetary Control Over Costs In A Retail Store

Budget men employed by retail sales organizations are probably a minority in the NSBB membership, however, a good dissertation on a subject not too familiar oftentimes leads to greater thought stimulation. This article on budgetary control over costs in a retail store offers just that opportunity. The author describes the problems and offers specific control steps which can be taken to lessen the impact of expenses on profits. Adaptation of the solutions to your problems will naturally present themselves to the readers.

In any consideration of budgetary controls we must first ask ourselves a few basic questions in order that we may be on common ground. First, what is a budget? A budget may mean different things to different people. Webster gives the following as an example of a budget "The annual financial statement which the British Chancellor of the Exchequer submits in behalf of the ministers of the House of Commons for approval. It comprehends a general review of the finances of the country with the proposed financial measures for the ensuing year". Historically, Webster is correct. The first attempt to use budgetary control was that of the British Chancellor in the eighteenth century. To the average married couple a budget means a balancing of income and outgo. To the businessman, however, a budget is a plan by which to govern the operation of a business for a definite future period.

The operating accounts of a store have a very definite historical value as a record of the past but their most practical use lies in their being a guide to the future. In business we constantly make assumptions as to future conditions when we buy merchandise, when we hire people, when we lease a store, and we are backing our assumptions with our good dollars. Anything we can do to help make these assumptions less of a guess and more of a certainty and also to help us control these future conditions so far as possible is worth its weight in dollars to business management.

We must always bear in mind, however, that the past record is only a guide which must be considered in the light of (a) what changes in business conditions do we anticipate in the future, (b) what improvements can we make in those past operating figures and (c) how can these improvements be accomplished.

The second question is, what is the purpose of budgeting? The fundamental purpose of business budgeting, of course, is to find the most profitable course through which the efforts of the business may be directed and to hold the business to that course. This fundamental purpose may be divided into various segments as follows:

1. To base action upon thorough investigation and study.
2. To enlist the assistance of the entire organization in determining the most profitable course.
3. To serve as a declaration of policies.
4. To define objectives.
5. To relate the activities of the business to the expected general trend of business conditions.
6. To direct capital and effort into the most profitable channels.
7. To coordinate and correlate effort.

Now, if we are in agreement as to the meaning and purpose of a budget we are in a position to go on to consideration of how to budget. This is a topic on which many millions of words have been written, not the least volume of which have been in relation to the budget for the retail store. However, we will attempt here to discuss a few points in budgeting and some of the controls inherent in budgeting that concern the retail store.

RETAIL BUDGET STARTING POINT

It is generally conceded that proper budgeting must first take into consideration the items that are not directly controllable by the management. In a retail store the two major non-controllable items, those around which the entire operations of the store revolve, are gross sales and returns, culminating in net sales. Therefore, budgeting

in a retail store must generally begin with net sales, not only because sales are not or only partially controlled by management, but also because in the retail business traditionally all costs and expenses are geared to and judged in relation to sales. I might add that I am not wholly in accord with the latter and I think that a trend away from this judging of costs by relation to sales has developed. However, it is important that the non-controllable items such as sales be budgeted first.

The sales budget to be of real value to us in budgeting costs should be broken down by department and by months and, if at all possible, should give us some idea of the number of transactions which may be expected each month in order to achieve the volume of sales budgeted. Of course, the budgeting of expected sales volume is the province of the operating people but, as we all know, in order to be a good merchandiser the buyer or merchandise manager has to be an optimist. Therefore, though the budget department does not budget sales, we should be in a position to know how each departmental sales budget was arrived at and from our knowledge of the operations of our store be reasonably sure that there is adequate support for the volume budgeted. Otherwise, as sales is the basis for our entire budget, we may find ourselves building a beautiful budgetary edifice with a very weak foundation, which will come tumbling around our ears.

PURCHASES BUDGETED

Once the sales budget for the coming period, generally the next six months, has been approved, the next problem is that of purchases for the same period. Just as we have considered sales during the season, by months, so would we consider purchases. In other words, how much are we going to buy each month during the season in order to have the merchandise necessary to have the planned sales volume? In order to determine how much it is necessary to purchase, we have to take into account the beginning and ending inventories of that season. Knowing what our inventory is at the time the budget is prepared, knowing what merchandise has been ordered and what is open to buy, we must predicate an ending inventory which will result in a cost of goods sold or we must predicate a cost of goods sold which will result in a desired ending inventory. In either case the idea is to use one as a check on the validity of the other.

With the information we now have we can determine whether the cost of goods sold and ending inventory forecast seem reasonable in view of our past experience in the department as to inventories at the end of each season and gross margins realized in the department during that season. Once having established the beginning and ending inventories, goods to be purchased, and sales, we have arrived at the gross margin, by departments. At this point we have established with the operating department heads, that is the buyers and merchandise people, a certain measure of control. We have established the amount they expect to purchase for the coming season and the gross margin they expect to realize.

MARK-ONS

There is one thing I would like to point out which should be given consideration when discussing gross margin. Gross margin in itself is not a sacred figure. It must be considered in the light of the expenses that will be incurred in connection with the particular merchandise from the time it is first ordered until it is in the customer's hands to stay and has been paid for. The mark-ons to be used in various departments have had a tendency to become traditional and buyers not only attempt to obtain these mark-ons on the merchandise handled in their departments but are sometimes subject to criticism by management, the controller, or even the auditors because they have not been able to sell their merchandise at what is considered to be the proper mark-on. But, as we have always known and as the discount houses have proven, the traditional mark-on percentages can be adjusted to generate an increased volume of sales which may result in a greater departmental profit, which is what we are actually after. And we may find that it may be more profitable to reduce our mark-on percentages on more expensive merchandise rather than on less expensive goods.

For example, in a department we may have goods priced at $10 and goods of the same nature but of better quality priced at $30. Now in the matter of ordering, receiving, marking, sales audit, delivery, billing, accounts receivable and cash receipts there will be no more work involved in each unit of $30 goods than there will be of $10 goods. Therefore, to maintain the same net profit margin, we can work on a smaller mark-on percentage on the $30 goods. On the other hand, in dealing with low-priced items we may find that, even though we do a large volume, we have to work on a considerable mark-on percentage or else the cost per unit sold of the above-mentioned ordering, etc. will be greater than the gross margin realized, and we will lose money on each sale.

There is where our traditional retail accounting practice of comparing expenses as a percent of sales in total or by departments may be misleading us. Perhaps we had better pay more attention to the actual cost in dollars and cents of each transaction in the store and determine on that basis what mark-on we need to make an article profitable to handle. In order to do this we are going to have to know the cost of each of the services performed in the store in dollars and cents and not as a percent of sales. I don't want to belabor this point as it is rather a side issue to our major topic, but it is one to think

about. In this connection I would like to refer you to an article in the Harvard Business Review of May-June, 1957 by Malcolm P. McNair and Eleanor G. May entitled "Pricing for Profit" which goes into this matter at some length.

Before we leave gross margin we should be assured that all factors entering into gross margin have been given effect. By that I mean such things as markdowns, employee discounts, purchase discounts, and inventory shrinkages. Some of these can be determined by using past experience and some will have to be estimated. However, as controllers, we should be in a position to know exactly what items were taken into account in arriving at gross margin and be in a position to question any which do not seem reasonable or proper.

DETERMINING EXPENSE LEVEL

From the gross margin thus established would be deducted what is considered a reasonable profit, after considering business conditions, capital invested, sales, etc. The remainder presumably is the amount we have available for expenses. However, it should be borne in mind that the amount deducted as expected profit is the minimum and we should try to budget our expenses to achieve a greater profit if at all possible.

Our next step is to budget expenses, keeping in mind the overall limitation imposed by our gross margin less profit. It can be fairly stated that a considerable proportion of retailing profits are in expenses rather than gross margins and that control over expenses has a major effect on the degree to which a store will be successful. Expenses in a retail store are divided in various ways. They are charged to departments, they are divided by functions or expense centers, whichever method you are using, and they are classified by natural divisions such as payrolls, rentals, advertising, etc.

Generally the reason for charging expenses to departments is to determine what profit or loss that department makes. However, many of the expenses charged to a department may not be controllable by the department manager and in some cases there is no real basis for pro-rating certain expenses to departments and the arbitrary basis of sales is used. From a standpoint of controlling the expenses in advance rather than determining subsequently what the expenses were, in most instances, can best be controlled by natural divisions.

ALLOCATION OF EXPENSES

Taking payrolls, the largest single expense of a store, as an example, we would first determine how many people we need in each department or expense center. I would like to make clear here that I do not mean how many people we have, but how many we need as an absolute minimum. If we find, as we will, that monthly and seasonal sales of a department will fluctuate, can we adjust our sales staff accordingly, perhaps by the use of part-time help or some other device?

At this point I would like to mention the word "productivity". This matter of productivity is one of the most important to be dealt with in the operations of any business and the budgeting therefore. If the employees are productive, the expenses in relation to the volume of sales may be substantially lower than in a store where the employees are not productive. As you all undoubtedly know, there has been considerable discussion in recent years about production unit accounting. Production unit accounting is a philosophy or technique used to measure productivity for the purpose of reducing expenses. I bring this matter up in a discussion of budgeting because I feel that anything having to do with increasing the income or decreasing the expenses of a store are part of budgetary control and should be taken into account when budgeting, if possible.

In brief, however, the technique of productivity measurement is no different than the making of time studies and the setting of production norms and standard costs, which industry has been doing for many years. Inasmuch as salaries are such a major portion of a store's expenses, every device that can be used to decrease the amount of salaries in relation to income must be adopted, if the retail store as we know it is to survive.

HOW MANY SALES PEOPLE?

I would like to refer back to earlier in this article where reference was made to the sales budget. You may recall I mentioned attempting to determine the number of transactions required in each department to reach the budgeted sales volume. Taking into consideration that the length of time required to make a sale is not necessarily the same in each department, we should still have some idea of how many transactions a clerk in a given department should be able to handle in a given period. This would help us to determine the number of sales people required in each department during the period we are budgeting for, broken down into months, weeks, and even days where feasible.

In considering the number of people required we should take into account the possibility of changing our setup, if practicable, to eliminate some clerks in some departments and put the appropriate departments on somewhat of a serve-self, supermarket type of operation. Of course we all realize that this may have only limited application in our stores and in some instances the disadvantages outweigh the advantages of this type of operation. I only wish to call to your attention the desirability of at least thinking about it if you haven't already done so.

After we have ascertained to the best of our ability the number of people required in each

selling department then we should attempt to do the same thing for all non-selling departments. In other words we should attempt to determine the minimum number of employees necessary in each phase of the operation to carry on the amount of business we anticipate. Of course these determinations have to be made with the help and consent of the department heads or else they will be of little or no value.

CONTROL OF OTHER EXPENSES

As we all know, the items of expense in a store are not all equally controllable and of course the tendency is to concentrate on the more controllable items, especially when these involve large sums of money. Sometimes a store will concentrate on these items and neglect the others. Inasmuch as payrolls are probably equal to or in excess of all other expenses combined it is quite a temptation to confine all or most of our efforts to controlling payrolls. The more comprehensive a plan of budgetary controls is, however, the more effective it will be, so that we should attempt to cover every class and item of expense. If we concentrate on payrolls but ignore other areas in which there may be excessive expenses we may end up by convincing our employees we are picking on them thus making them antagonistic toward our objective and, instead of helping, they may hinder us in achieving this objective of keeping costs to their absolute minimum.

Let us examine just a few of the other natural expenses and discuss some ideas about controlling them. Take for example, rent. Rent may be considered as being so fixed by leases, etc. that it is for all practical purposes out of our control. But is this always the case? First of all we must determine whether we are utilizing to the fullest extent the space we have. For instance, by a careful review of the sales per square foot area we may find that some departments are cramped for space and others have more than they need. Even though a rearrangement of the departmental selling areas may not decrease the rent, it may produce increased sales which would, in most instances result in a lower percentage of rent to sales.

Is the most economical use being made of stock-room space? Do we need all we have? Let us look at the non-selling floor space. Can any of it be converted to selling space? Can any of it be used for storage space and save the use of outside warehouses?

After we have determined what if any rearrangements would provide the most efficient and economical use of the space we have, does this rearrangement leave us with any excess space? If so, can we surrender the space and save the rent? If not, or until we can surrender the space can we lease the space to someone for an amount which would make it worth our while to forego the use of it for ourselves?

However, the ideal time to exercise control over rent is before committing ourselves for the occupancy of additional space. We should be sure that (1) we cannot possibly get the additional space from what we already have, (2) that we will, in the light of business trends, be in a position to profitably utilize the space for the life of the lease and, (3) that the benefits or profits accruing to us from the use of the space exceed the cost of occupying it. If, during boom times, expense budgeting on rent was practiced as carefully as on say, payrolls, many stores might avoid some of the building expansion that becomes such a burden when prosperous times take a downturn, which inevitably happens.

THE TAX HEADACHE

Let us take another example, that of taxes. The taxes that a business pays are many and varied. Some can be controlled either as to their incidence or amount and some are for practical purposes, beyond our control. Some of the taxes which come to mind are real and personal property taxes, federal and state unemployment taxes, social security tax, state privilege tax, intangibles tax, business activities tax, and last but not least the income tax. It is true that the income tax is not considered an operating expense; however, there is no reason why we should not endeavor to control the amount of income tax we have to pay just as we would any other tax.

And then, of course, we mustn't forget the taxes which we collect from our customers and employees and remit to the various governmental agencies such as excise tax, sales tax and withholding taxes on income. It is true that theoretically these are not an expense of the business, as we merely act as agents to collect these and remit them to the proper place. However, there is no doubt that there is considerable expense involved to the store in collecting, recording and remitting these taxes in the proper amounts to the proper agencies of government.

Now, to consider what we can do to minimize the taxes enumerated above. Property taxes in Michigan are assessed on January 1 of each year so the most practical method of keeping these taxes to a minimum is to be sure that all controllable property values are at their lowest ebb on January 1. For example, any merchandise not needed for December business should not be received until after January 1. Consideration should be given to giving effect to all markdowns possible in December rather than in January, if the January 1 figure is used rather than January 31 or the average monthly inventory.

In other words, when budgeting our merchandise and inventory requirements consideration should be given to the effect on property taxes of having inventories on hand in excess of minimum requirements and of having such inventories valued at unrealistic values. Care should be taken that all items of furniture, fixtures or leasehold improvements are removed promptly

from the accounts when sold, scrapped or otherwise disposed of so that these will not be reflected in the amount subject to tax on January 1.

When the question of whether to expense or whether to capitalize arises bear in mind that, in addition to the effect on income taxes, the business will be paying a property tax of approximately $40 a thousand, in Detroit, on the depreciated value of the item in question as long as it remains in our possession. On an item capitalized with a life of ten years, you will pay in property taxes approximately 18% of its original cost, over its ten-year life. This is no small matter and should also be given consideration when deciding whether to buy or rent an asset, such as I.B.M. equipment, etc.

PAYROLL TAXES

Let us consider what can be done to control the various state and federal payroll taxes. Naturally, if we control our payrolls so as to use the smallest number of employees commensurate with proper operating results we will automatically reduce our payroll taxes. However, there are other matters which could be considered. For example, how can we assure ourselves that we will have the lowest possible rate for state unemployment tax? Inasmuch as the rates in Michigan this year vary from 6/10 of 1% to 4-1/2% of payroll not in excess of $3,000, you can readily see that a substantial saving can be accomplished by keeping the rate to the minimum. In order to do this of course we must maintain the reserve fund credited to our account by the state at the proper level. Sometimes this may be accomplished by making an additional voluntary contribution, which may be less than the amount you might have to pay if the rate were raised. However, the best way to maintain the lowest rate is to budget your employees carefully enough so there is a minimum of personnel laid off.

As you all know, the benefits paid to employees laid off are charged against the employer's reserve fund and thus by depleting the fund may cause an increase in the rate. Another point to consider is that salaries and wages paid in excess of $3,000 are not subject to unemployment tax and those paid in excess of $4,200 are not subject to social security tax. Therefore, it is to the store's advantage to have one clerk earning more money (so long as no premium time is involved) than to have two clerks earning in the aggregate as much as the one, if the time spent by the one person is equal to the time spent by the two. This can be a considerable factor. Consider the case of one employee earning $6,000 or two employees earning $3,000 each. If we use an unemployment rate of 3% as an example, having two employees earning $3,000 each will cost us $130.50 in additional payroll taxes over what we would pay on the one employee earning $6,000. Multiply that by any number of instances and you could have a substantial amount of money involved.

INCOME TAX

Now back to the income tax for a moment. Even though this is not considered an operating expense, in budgeting and controlling expenses we should give even more consideration to minimizing this tax than the others. The reason for this is that a dollar of income tax saved is usually worth approximately two dollars of pretax savings. There have been innumerable hundreds of volumes written on this topic by people far more versed in the subject than I, so I will not attempt any dissertation thereon. However, there are a few things that might be mentioned.

For instance, if a new branch is being contemplated, consideration might be given to incorporating the branch as a new corporation to obtain the $25,000 surtax exemption for it as well as the main store. There are certain pitfalls in connection with this but if they can be feasibly avoided considerable federal income taxes might be saved by incorporating each branch as it is opened. As another instance, some form of accelerated depreciation on fixed assets might be considered, say declining balance or sum of years digits. Consideration might be given to expensing minor items which we may have capitalized in the past because of their nature. And, of course, the use of last-in, first-out inventory valuation can, in a period of rising prices, result in substantial tax savings.

EXPENSE CLASSIFICATION

Up until not too long ago the expenses of a store were divided into fourteen natural divisions. These have been increased to seventeen natural divisions by the addition of four new divisions and the elimination of one of the previous divisions. Three of the new ones, Donations, Losses from Bad Debts and Pensions had all been previously included in unclassified expense. This is a very definite step in the right directior for control purposes because the more detailed the accounts are and the more sharply defined are the charges to be made to each, the easier it becomes to budget and control these expenses. Actually, I would like to see the natural divisions arranged so that every foreseeable or recurring expense can be charged to a specific self-explanatory account and only nonrecurring, unforeseeable charges or charges of a very minor nature made to unclassified expense.

We have covered here only a few of the natural expense divisions, but these are only examples of the type of thinking that is going to have to be done if we are to keep these expenses as low as possible. In preparing the expense budget, therefore, each class of expense should be considered, analyzed and every avenue of possible reduction therein explored.

We know that no budget ever devised by the human mind is going to be perfect so that ad-

justments are going to have to be made from time to time. I would like to emphasize, however, that adjustments, if necessary, should be made either way. Adjustments may arise because of differences between the budgeted and actual sales volume, because of unanticipated changes in policy necessitating increased or decreased expenditures or the necessity for adjustment may be revealed by careful study and control over expenses after the budget has been prepared. The study of factors affecting the budgeting and planning should be carried on continously and not merely when the budget is being prepared. If this is done the need and the reasons for adjustment to the budget will be readily observed. The necessity for adjustments should be called to the attention of and approved by the same authority as was the original budget.

APPRAISAL OF OVERALL PLAN

After we have completed our expense budget and have determined the total, we must ascertain that it is less or no more than the amount arrived at earlier in this article by deducting the estimated net income from the budgeted gross margin. If the total expense budget exceeds this amount then we had better go over it again more closely than before and determine if there are any spots where the expenses can be further reduced. This may result in an even better job of budgeting than before.

After we have prepared our budget, what shall we do with it? Each department head should be given a budget for his department. If a selling department, it should show sales, gross margin, expenses chargeable to the department either direct or an allocated share of store expense and net budgeted contribution toward the general store overhead and profit. Or you may also allocate general store expense and such things as federal income taxes, etc. to each department to arrive at a profit figure for each department.

There has been considerable discussion for some time regarding this matter of charging the department with all expenses whether controllable by the department or not, or charging only those expenses that are controllable and considering the excess of gross margin over these expenses as being the contribution of the department to the store. Personally, I prefer the latter approach, as I can see no point in giving a department head a budget containing a gross margin and controllable expenses, both of which he had a hand in preparing and has agreed to, and then confusing the issue by charging him with items that he has no control over and knows nothing about. The tendency would be, I should think, to make him throw up his hands and regard the entire budget as somewhat of a piece of paper with a lot of figures by which he is no longer bound.

The non-selling department heads should also be given a copy of the budget for their departments, which, in my opinion, should also be confined to the expenses over which they have some control.

PERFORMANCE REPORTS

Periodically, the actual figures should be compared with the budget and all differences, except minor deviations, investigated. The shorter lapse of time between these periodic comparisons, the better control the budget will provide, because if the comparison and investigation uncover something that can be corrected, it can be done before too great harm is done. Also, it is imperative that the deviations be investigated promptly and reported on to the officials responsible for the budget. In fact, if it can be worked out a procedure should be instituted whereby each responsible department head must ask approval before making any expenditure in excess of the budget rather than explaining the expenditure after it has been made.

In preparing the budget for a period, a careful review of the differences between budgeted and actual figures of the previous period or periods may be very helpful and should be made if at all possible.

In closing, I would like to make this point. Budgeting, for the controller, is not merely a matter of dropping estimated amounts into a line on a page and comparing them with actual results from time to time. Budget time should be the occasion for a searching, analytical review of all phases of the store's operations and a coordinated effort on the part of all personnel to increase income and decrease outgo for the coming period.

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A Direct Labor Budgeting and Scheduling System For R & D Activities

Research and development activities have received considerable public attention in recent months, and since "where there is smoke there is fire," it must be that the control of the expenditures for R & D is presenting problems to our members. This article deals with the control of direct labor and establishing a graphic means of measuring performance against a master plan.

Direct labor is often used as a basic estimating factor for Research and Development activities associated with Government CPFF contracts since it represents such a large share of contract costs. This is reasonable because the product sold often consists of highly technical services or studies. Overhead rates and hence overhead contract costs can be influenced considerably by the application of this labor, i.e., whether or not it can be fully utilized over a period of time. If it is possible to plan and budget direct labor, we should be able to accomplish a number of worth while objectives. Some of these are:

1. Accurate forecasts and evaluations of project labor costs to determine activity levels, manpower requirements and monitor expenditures.

2. Accurate forecasts of overhead rates.

3. Regular checks on project status to improve forward planning.

The basic problem in R & D work as differentiated from repetitive activities or those which are different but nevertheless can be broken down into a series of fundamental steps, is in relating job completion to a budget derived from a rough estimate. This is so since the estimate may have been made from insufficient knowledge. The direct labor budget as used here is not to be looked upon as a standard of performance but as a tool for evaluating expenditure with respect to plan. The same statement holds true for scheduling in measurement of job completion. We emphasize this point in order to bring out clearly that the very nature of the work does not lend itself to precise budgets and schedules as such.

Nevertheless, these tools can be used with a very simple system to point out variations. Such variations can then be investigated as is generally the case in most budgetary operations. Or they can be used to adjust the project schedule or the budget to bring it into line with the plan, etc. It is suggested that more emphasis be placed upon the latter approach, at least initially, if at all possible.

The system described pre-supposes a planning staff composed of coordination, scheduling and budgets with these functions assimilating the data. It is very important, of course, to obtain full participation of the technical supervisors. Actually, effective operation is a joing effort,

DEFINITIONS

The following terms are defined for use in the system:

1. **Budget** – coverage from an official budget distributing agency in hours. In this system, budget is restricted to direct labor hours whether covered by internal or external funds.

   a. **Preliminary** – token budget issued to cover initiation of work prior to availability of statement of work, estimates, etc.

   b. **Original** – budget based on proposal estimate, usually issued after prospective customer has given a "go-ahead" but before contract has been signed off.

   c. **Firm** – budget based on negotiated contract.

   d. **Pending** – budget associated with change in work scope, funding, i.e., follow-on contracts – interim coverage before firm coverage is received.

   e. **Total** – the sum of firm plus pending budget before firm is available.

2. **Plan** – a distribution of hour requirements compatible with the schedule of approved work for firm business.

3. **Forecast** – a plan with judgement applied generally used for financial and manpower projections.

4. **Schedule** – a time table.

5. **Present Estimate** – current total expenditure (hours) plus those planned to complete all work authorized.

6. **Men** – the number of people corresponding to a work load in hours per unit of time (week) divided by a labor realization factor. This term is often called equivalent men.

DESCRIPTION OF SYSTEM

Evaluation of work progress can be depicted on Exhibit 1 (Project Status). This chart is maintained by Coordination and brought up to date monthly for presentation at the Coordination Meeting. Interpretation and progress reporting is the responsibility of the project engineer.

Exhibit 1 furnishes the following information:

1. Cumulative expenditure to date (hours and percent) related to percent job completion.
2. Cumulative budget (hours and percent) related to percent job completion.
3. Cumulative present estimate (hours and percent), if different from budget, related to percent job completion.
4. Schedule (months) corresponding to budget estimate related to percent job completion.
5. Revised schedule(s) (months) corresponding to present estimate related to percent job completion.

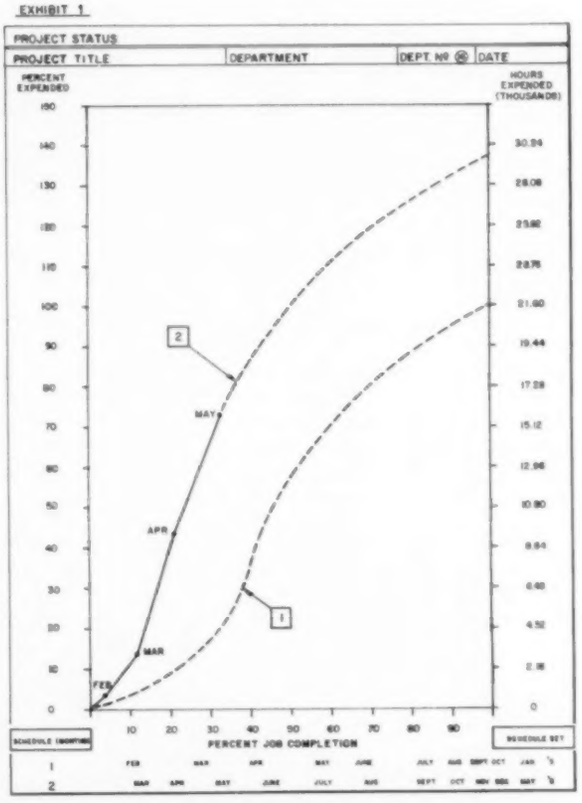
Exhibit 1 is a type of Lorenz curve with certain variations. Choice of the vertical scale usally should provide for expenditure in excess of budget. In the example, a range of 0-150% is chosen. The right hand vertical scale contains hour expenditure corresponding to precent expenditure at the left. The horizontal scale must have a range of from 0-100%. Changing job scope during the work span is handled via the present estimate line or re-scheduling or, as is generally the case, both.

The lines 1 and 2 shown on Exhibit 1 reveal the following information. In January, line 1 was drawn based on distriubtion of firm budget and original schedule. Note that the line is roughly S-shamped. This shape is fairly representative for this type of activity. A straight line from 0-100% would mean that expenditure and progress are always equal in percent. Such is not generally the case.

In our example, line 1 exhibits the following characteristics.

1. Job completion more rapid than expenditure at inception since few people are involved in the beginning stages.
2. A rapid build-up in expenditure as detail activities commence, but without commensurate increase of job completion.
3. A falling off in rate of expenditure as the job moves toward completion.

EXHIBIT 1



Despite this original plan (line 1 and schedule 1), results through May have been charted on line 2. Actual experience is shown as a solid line. Note that actual plots are dated for comparison with schedule. It had become apparent by this time that re-scheduling was necessary in view of the divergences of lines 1 and 2. The accomplishment of this step was carried out by:

1. The extension of line 2 reflecting a higher expenditure at completion. The point where this line meets 100% job completion is the present estimate.
2. Insertion of a new schedule (2) in months

To summarize, then, the information revealed by lines 1 and 2:

Line 1 Expenditure of 21,600 hours with completion in October (drawn in January).

Line 2 Expenditure of 15,800 hours or 73% of budget and completion of 33% by the end of May; present estimate of 29,600 hours or 137% of budget completion in December.

SUPPORTING SCHEDULES AND CHARTS

Exhibit 1 (Project Status) is a control chart and depends for its information upon certain bud-

get and scheduling tools. These are illustrated by the following:

Exhibit 2 – Schedule Status

Exhibit 3 – Direct Labor Plan

Exhibit 4 – Budget Status

For purposes of cross-referencing data and lines, the designators 1 and 2 for locating lines 1 and 2 on Exhibit 1 (Project Status) are inserted where appropriate on each of these exhibits. They are the numbers enclosed in squares.

Exhibits 2-4 are discussed concurrently since they present different aspects of the same picture. It is necessary at this time to introduce the functional or Departmental breakdown since the project is, of course, planned by organizational unit. The use of these exhibits will then focus upon one Department's contribution to the project. It has been designated "16" and the number is encircled on each Exhibit.

Exhibit 2 (Schedule Status) is maintained by Scheduling and is a simplified Gant chart. It furnishes the following information for each Department working on the project:

1. Scheduled percent of job completion related to time (months).
2. Actual percent of job completion related to time (months).

In this type of work, time schedules can be set more easily than can measurements of completion. This is true since there is usually a date at which the job must be done even if the eventual product cannot be defined precisely. The fact that the work can be identified by assignment to participating departments means, of course, that it can be scheduled.

The difficulty in many types of R & D scheduling is first in measuring completion of individual departmental efforts and then in finding a common denominator with which to relate these to job (project) completion as a whole. It is our contention that it is not necessary to have available yardsticks or standards against which to measure progress. This is not to say that standards are not desirable. In some cases, for example - drawing preparation, they can be used effectively.

The fact that we may have a standard against which to measure one Department's contribution does not, however, solve the common denominator problem necessary to evaluate over-all project status. It has been this writer's experience that the problems of setting standards for R & D activity may founder upon the shoals of:

1. Lack of general acceptance.
2. Establishing the weighting or the common denominator.

EXHIBIT EXPLANATION

In our example, the problem of standards is avoided entirely. Scheduling sets up the horizontal bars depicting the span in months for each Department's effort. The length of each span is determined by each departmental supervisor and approved by the project engineer. It is the responsibility of the project engineer to see that these spans are compatible with the master schedule.

Once each departmental span has been established, the supervisor is asked to set scheduled completion percentages. This may be accomplished on a purely arbitrary basis. That is to say, the important step lies in setting down the percentages even if no basis is spelled out. Later, the merit of this approach will be mentioned.

EXHIBIT 2

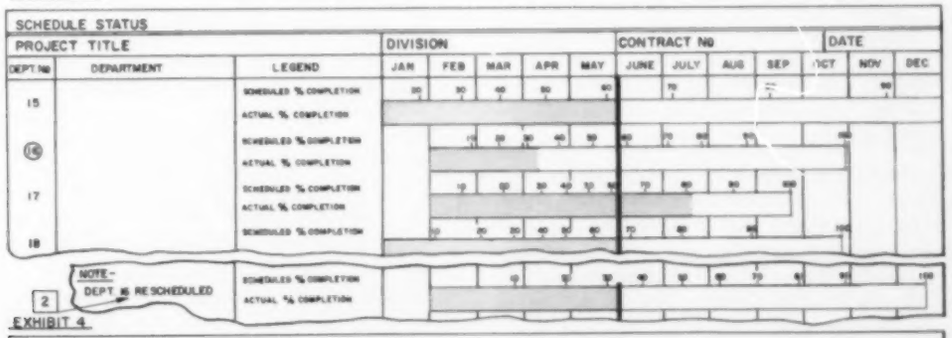
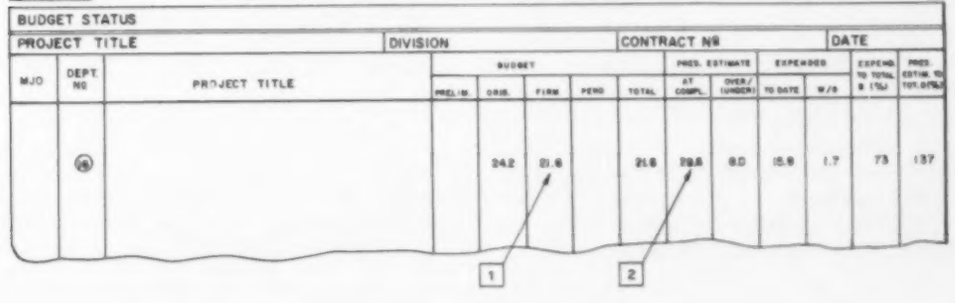


EXHIBIT 4



Each month departmental bars are colored to show job completion in percent as of date of issue. The scheduler obtains this information from each supervisor. The heavy vertical line shown on Exhibit 2 indicates the date of issue. The project engineer is then asked by scheduling to indicate total job completion in percent and whether re-scheduling is necessary. What he sees at this point is as follows:

1. Department 15 on schedule – 62% complete.
2. Department 16 behind schedule – 33% complete versus 57% scheduled.
3. Department 17 ahead of schedule – 81% complete versus 61% scheduled.

Before proceeding further, it will be desirable to describe Exhibit 3 (Direct Labor Plan) and Exhibit 4 (Budget Status).

EXHIBIT 3

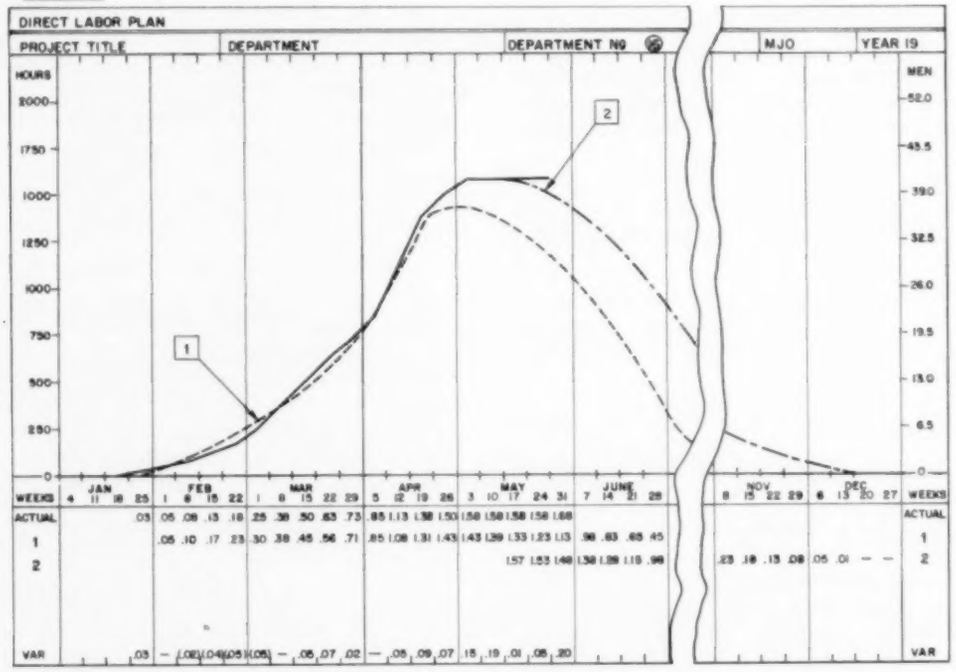


Exhibit 3 is established for each department and further detailed by project. The vertical scales equate hours and men through use of a realization factor based on experience. Line 1 represents a distribution of budget compatible with the departmental schedules. It is laid out by the scheduler and approved by the department supervisor. Weekly actuals and budget are entered below the chart as shown. The bottom line indicates the variance.

During May, variances became significant enough to require a new plan. The new plan was laid off after consultation between the scheduler, department supervisor and project engineer. It is designated line 2 on the chart. The extent to which additional manpower requirements may adversely affect other projects must also be worked out.

Returning once again to Exhibit 2 (Schedule Status), the decision to lay out a new plan required an extension of schedule. This is shown by insert below Exhibit 2. Re-scheduling of Department 16 may, or course, affect other Department Schedules. Although not illustrated in this example, other Departments and projects must be checked out. As such, re-scheduling may be quite broad in scope depending upon the circumstances.

Once this step has been accomplished, the project engineer determines the completion percentage for the project as a whole utilizing Exhibits 2 and 3. As we mentioned above, the fact that departmental supervisors have used arbitrary job completion percentages permits the project engineer to use judgement in determining project completion. If it were otherwise, he would be required to determine a common denominator for the departmental mix. This purely mechanical method, as has been pointed out, is not effective without good standards. By the use of direct labor plans and departmental schedules, variations, both in expenditure and schedule, become apparent rather early. The fact that these exhibits are inter related lends to their effectiveness.

Adding support to the effectiveness of Exhibits 2 and 3, is Exhibit 4 (Budget Status). Entries on the form come from the following sources:

1. Budget – Entries are made in columns "Prelim" through "Total" based on definition. When "firm" budget is issued, the sum of "firm" plus "pending" equals "total" budget. In our example, "firm" budget as issued is distributed on Exhibit 3 (line 1).

2. Present Estimate – As defined, this entry is obtained from a summation of actuals and line 2 on Exhibit 3. Budgets maintain expenditure accumulations.

Other entries are derived from either actual expenditures or from the two mentioned above. Exhibit 4 is prepared by Budgets, is summed by departments for each project and can be used as a summary of all project activity.

Now that discussion of use of Exhibits 2-4 has been completed, it is helpful to outline the sources of information supplied to Exhibit 1 in summary. This outline will follow the breakdown contained in the opening paragraph of this description.

1. Cumulative expenditure to date (hours and percent) – obtained from Exhibit 4 (Budget Status), 15.8 hours in thousands and 73%. These data locate the horizontal coordinates of the solid line.

2. Cumulative Budget (hours and percent – "Total" budget per Exhibit 4 (Budget Status) with distribution per Exhibit 3 (Direct Labor Plan) equated cumulatively to time in months. These data locate the horizontal coordinates of line 1.

3. Cumulative present estimate (hours and percent) – present estimate per Exhibit 4 (Budget Status) with distribution per Exhibit 3 (Direct Labor Plan) equated cumulatively to time in months. These data locate the horizontal coordinates of line 2, i.e., extension of the solid line.

4. Schedule in terms of percent job completion – Schedule per Exhibit 2 (Schedule Status). Original schedule locates vertical coordinates for line 1. Actual percent completion (shaded portion of bar – same exhibit) locates vertical coordinates of the solid line.

5. Revised schedule in terms of percent job completion – Schedule per insert below Exhibit 2. Percentages locate the vertical coordinates of line 2.

NEWS ABOUT MEMBERS

VERN RUTTER, Chicago Chapter member, conducted an AMA Seminar on the "Preparation of Operating Budgets" in New York.

MARV FORS, Research & Education Chairman of the Chicago Chapter, has been transferred to California by Jefferson Electric Company.

WALTER KNOBE, Milwaukee Chapter, presented the subject "Forecasting, Cost Reduction Techniques, and Setting of Selling Prices" to the members of the Marquette University Accounting Society.

BOB KNETZGER reports that the Milwaukee Chapter will once again present a three day Budget Techniques Institute at Madison, Wisconsin on March 11-13, under the sponsorship of the University of Wisconsin Extension Division.

Congratulations are in order for ED DORN of the Dayton Chapter who has recently been appointed Assistant Comptroller of The Dayton Rubber Co.

Early in January, R. DODYK and C. C. BENEDICT, Detroit Chapter Members, participated in a seminar sponsored by the American Management Association with regard to "Fundamentals in Finance and Accounting for Non-Financial Executives."

Congratulations to ERNEST LIMANN, New York Chapter, who was recently promoted to Plant Comptroller - Carteret Plant - Metal & Thermit Corp.

We are happy to hear that GEORGE R. WESTBY has returned to New York after a tour of duty in Peru, and is planning to resume his active participation in the affairs of the New York Chapter.

STANLEY BAUM, Chicago Chapter Seminar Chairman, has been appointed Controller of the Herst-Allen Company.

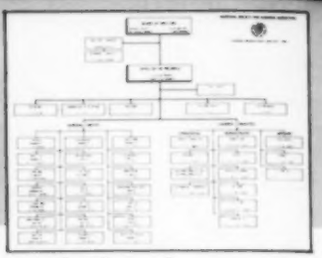
GEORGE J. SLAVICEK was promoted from Budget Manager to Controller of the Chicago & Ekco Engineering Division of the Ekco Products Company.

We have heard rumors that the Eastern Chapters may sponsor a regional conference. Perhaps in March. How about giving the rest of the members a full report?

The Philadelphia Chapter recently printed a complete Operations Procedure Manual pertaining to Budgets. Perhaps copies could be provided to members outside the Chapter. If you are interested please let this Editor know, and I will see if we can accommodate you.

J. R. HORNUNG, Detroit Chapter Member, suggests that all N.S.B.B. Members investigate and subscribe, as a sustaining member, to the Foundation for the Study of Cycles. Information can be obtained by writing to the Foundation office at East Brady, Pennsylvania.

HISTORY and ORGANIZATION of the NATIONAL SOCIETY for BUSINESS BUDGETING



PART 1

The National Society for Business Budgeting was formed in 1950 by merger of the Budget Executive Forum, an Eastern group and the National Association of Budget Officials, a Midwestern group. It was incorporated in 1951 in the State of Illinois as an educational, non-profit membership association operating under the chapter system. The organizing groups became chapters identified as Chicago, Milwaukee, Twin Cities and New York.

The objectives of the Society are:

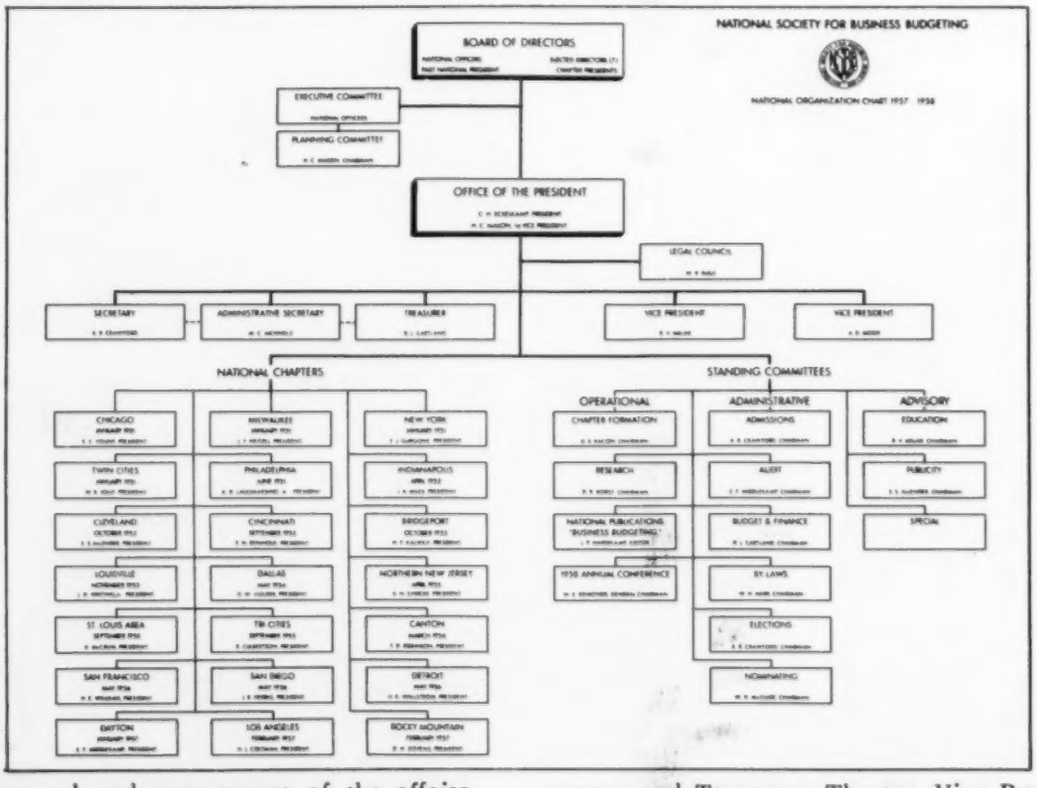
1. To foster a full and real understanding of the budgetary planning and control function as an aid to, and as a part of, effective management.
2. To assist in developing the competence of all those interested in the application of the budget function in management.
3. To collect and develop information, to improve procedures, and to conduct research in the field of budgetary planning and control.
4. To make available to educational institutions the information collected from its members and from its research activities. In this connection, the ultimate objective is to increase the number and improve the quality of the courses now being offered in budgeting in our schools and colleges.

It is an organization in which business executives can increase their knowledge of budget policies and techniques by the exchange of ideas in direct discussion with one another and by hearing outstanding speakers on budget subjects.

The foundation of the organization is, of course, the members which numbered approximately 850 as of July 1, 1957. From this reservoir of manpower and talent we:

1. Select the National and Chapter Officers, Directors and Committeemen.
2. Obtain the articles for our national publication-BUSINESS BUDGETING.
3. Fulfill the requests for speakers, discussion leaders, for our chapter meetings and other professional organizations and assistants for educational institutions.

The accompanying chart portrays the national organization as it is today. Future conditions may require some rearrangement but basically the lines of authority and responsibility will remain the same.



The control and management of the affairs, funds and property are vested in the BOARD OF DIRECTORS which comprises the -

National officers
Immediate past national president
Elected directors (seven)
Chapter presidents

The national officers elected by the members are the President, First Vice President, Secretary and Treasurer. The two Vice Presidents are elected by the Board of Directors from among their number. The term of office of all officers is one year. The President and the First Vice President may not serve consecutive terms in their respective offices.

The seven directors-at-large are also elected by the members; six for three years each, one

third retiring each year. One director, representing non-chapter affiliated members, is elected for a term of one year.

The Board meets regularly twice a year usually the latter part of September and May. The Chapter Presidents-elect are invited to attend the May meeting as observers and for orientation in the national affairs of the Society.

The center of administrative activity for the national organization lies in the OFFICE OF THE PRESIDENT which includes the President and First Vice President. The President reports directly to the Board of Directors; he is ex-officio a member of all committees except the Auditing and Nominating Committees.

The EXECUTIVE COMMITTEE, automatically under the chairmanship of the President, originally consisted of three members; i.e. the President, the First Vice President and the immediate Past President. During the last year, however, it was felt that wider participation in the Executive Committee was desirable because the Board of Directors itself was becoming so large that it did not lend itself to effective action. Therefore, the Executive Committee now consists of the three members named above plus the two additional Vice Presidents, the Secretary and the Treasurer, for a total of seven. As a matter of fact this was nothing more than the recognition of actual practice in that the Executive Committee had always found it necessary to invite other officers and key committee people to the meetings as guests.

The Executive Committee is responsible for carrying out the operations of the Society and has authority in all matters not specifically reserved to the Board of Directors. In practice, however, the Executive Committee meets the day before the Board meeting in fall and in spring and covers all important business with the Board before any significant action is taken. During the year, of course, there is considerable correspondence between the President and other members of the Executive Committee as he seeks their help and guidance in making the decisions for which he is responsible. In less formal terms the Executive Committee is the group in which most of the important decisions affecting the Society are discussed and "hashed over". Generally speaking the Executive Committee comes to the Board with specific recommendations which make it unnecessary for the Board itself to review the detail underlying those recommendations. Some of the more important items which have been considered by the Executive Committee over the last two or three years include:

1. Preparing the Society for the very fast growth which it has already exhibited.
2. What kind of a publication should the Society put out and how frequently should it be issued?
3. The hiring of outside help to carry on the administrative functions of the Society which were becoming much too burdensome for volunteer help.
4. Policy with respect to the site of, and general approach to, the National Conference.
5. Detailed discussion of the problems connected with the research program and specifically with respect to the textbook project.
6. Remuneration for the editors of our publication and textbook.
7. How to best conduct our efforts in the direction of chapter formation.

In addition to the regularly scheduled meetings just prior to the Fall and Spring Board Meetings, the general plan is that the Executive Committee will meet at least once or twice during the year for discussion of intermediate problems. In this respect it might be pointed out that having a membership of seven will make it easier to secure a quorum of the committee.

Members of the Executive Committee are frequently called upon as speakers to represent the Society. Some of the chapters have a policy of asking a member of the Executive Committee to address their chapter once a year, and national policy dictates that a member of the Executive Committee present the charter to new chapters.

The Executive Committee is the top-level working committee whose job it is to coordinate all the functions of the Society on behalf of the Board of Directors.

The PLANNING COMMITTEE is the outgrowth of special committees appointed in 1955 and 1957 to study various problems inherent with the growth of the organization. The purpose of this committee is to review internal and external conditions to determine whether modifications or refinements are desirable with respect to the Society's objectives and methods of operation and to prepare progressive long term financial forecasts for a period of three to five years. It is an advisory committee reporting to the Executive Committee. The distinction between the two committees is that the Planning Committee is primarily concerned with the future operations of the Society, three to five years ahead, whereas the Executive Committee is chiefly concerned with the current year's affairs. The membership of the Executive Committee is limited to those prescribed by the by-laws. The Planning Committee is open to all members by appointment by the President without limitation as to reappointment thus maintaining a continuity of interest and knowledge of the operations. It also eliminates the need for appointing committees to study specific problems and being prepared to recommend changes in a timely and effective manner.

The Secretary and Treasurer are elected by the members for a term of one year but may succeed themselves for the same office. The administrative functions of these two offices became two burdensome to continue on a voluntary basis. There was also some duplication in record keeping. Both conditions have been corrected by the Directors authorizing the Secretary and Treasurer to hire an Administrative Secretary and staff.

The Secretary is chairman of the Admissions and Election Committees and the Treasurer is chairman of the Budget and Finance Committee.

The standing committees fall into three major categories – operational, administrative and advisory. Their functions will be explained more fully in subsequent issues of this publication.

By: Dr. Robert M. Soldofsky
Assistant Professor of Finance
State University of Iowa

Depreciation, Economics, and The Conservation of Cash

With the continuing advance of automation, the problem of providing adequately for depreciation of assets deserves your prompt consideration. The relative merits of the various federally approved methods are discussed, and the author takes a definite stand. He exhorts all to reappraise their procedure in light of the arguments presented.

Depreciation expense is one of the most controversial items in the Statement of Income and Expense. Despite the continuing stream of articles and books by accountants, economists, engineers, business administrators, and others, there is still no common agreement on the reason for making a periodic charge for the depreciation of fixed assets. The lack of agreement stems from the different orientations from which various individuals seek the significance of the depreciation charge.

When the question is asked, "Why charge depreciation?" there will be a wide variety of answers. One of the usual answers given to the query will point out that depreciation is a deductible expense for tax purposes. Therefore, the more depreciation that can be charged, the larger the expenses will be and the lower the net income before taxes. The result is lower tax payments and the conservation of cash. In these days of extremely high taxes, anything that can be done within the limits of the tax code should be done to reduce taxes. If taxes can be reduced by increasing the amount of depreciation charged, that should be done because the productive efficiency of the fixed assets is not effected by the charge for depreciation.

A second answer given by students who have learned that depreciation is a source of cash and by businessmen is that the cash released or made available by accounting for depreciation is essential to replace worn out or obsolete equipment. In fact, the thing that is wrong is not that depreciation releases cash but that it doesn't release enough cash to replace even the same equipment because of the rising price level.

The third and last of the most frequently stated reasons for charging depreciation is that depreciation is a periodic expense and must be charged against income in the period in which it is incurred. Accounting theorists, economic theorists, and writers in business finance agree that the "center of gravity" of any accounting system is an accurate determination of periodic net income. In order to achieve this goal, an accurate accounting for revenues and expenses during each period is essential.

Each of these three answers has some merit. Many individuals who answer to the question, "Why charge depreciation?" would insist that two of the suggested answers, or even all three would be necessary for a complete answer.

ECONOMIC NATURE OF DEPRECIATION

Before the question, "Why charge depreciation?" is attacked directly, it is best to discuss the nature of depreciation. It is clear that if a new machine is purchased and used that its dollar value, whether measured in terms of its remaining usefulness to its owners or its market value, will decline from the machine's initial price.

It is assumed that the machine would not be purchased unless it was anticipated that the net value of its output over its expected service life would be at least equal to its initial price. Depreciation is a measure of the run off of the original value or price of the machine; depreciation is a measure of the contribution of the machine to the cost of the product it helps to produce. It is assumed that the original economic value of the machine is transferred to or becomes embodied in the product of the machine in the productive process and that the entire original economic value less any scrap value is transferred to the product during the service life of the machine. In order to isolate and study the contribution of the machine itself to the cost of the product, it would be nec-

essary to assume that a number of other factors remained constant.

In order to measure the depreciation accurately for a given period of time, it would have to be assumed (1) that the prices of all other items going into the product remained unchanged, (2) that there were no changes in the technique or organization of production, (3) that there were no changes in the rate of output. At the end of this given period of time, the difference between the original price of the machine and its present value would be a measure of the depreciation that had occurred.

The original price of the machine would be a matter of legal record. The value of the machine would be a matter of legal record. The value of the machine at the end of the period could be measured in either of two ways. First, its value would be equal to the anticipated value of its contribution to the product over its remaining service life. Second - assuming that it is a standard machine for which there is an active and extensive resale market - the market price of the used machine market would be a good estimate of its remaining value. If it is reasonable to assume that buyers of second hand machinery would not pay more for the used machine than the anticipated value of its contribution to their product during its remaining service life, the value to the present owner and to the new owner should be almost the same except for the expenses involved in transferring ownership of the machine and moving the machine itself from one location to another and placing it in operating condition.

ECONOMIC REALITY

All of this is a way of saying that depreciation is an economic reality. Depreciation can be measured or approximated periodically and should, therefore, be accounted for as an expense in the period in which it is incurred.

In the real world, the basic nature of depreciation is obscured by such things as changes in relative prices and the general level of prices, technological changes, and changes in demand for the product of the machine. The cry that the depreciation allowance is not large enough to finance the replacement of an old machine by a new machine may be due to the rising price level or the fact that the new machine is more complex and would cost more even at the original price level.

Even though one of the effects of charging depreciation is the release of cash and the reduction of taxes, the central purpose for measuring or estimating depreciation and recording it remains an accurate accounting for periodic costs. Business decisions must be based upon an accurate knowledge of past net income and anticipated net income. Net income is the difference between revenue and costs. Assuming a constant price level, at zero net income capital is conserved. If a net income is earned, capital is being increased; if losses are sustained, capital is being decreased.

The occurrence of changes in relative prices and the price level, technological changes, changes in output, and decisions which are a part of a firm's strategy to minimize or postpone income taxes, should not obscure the nature of existence of depreciation as the periodic cost of using depreciable assets.

ECONOMIC AND FINANCIAL ASPECTS

At this point it is convenient to observe that the decision to replace one machine by another has both economic and financial aspects.

As a matter of economic calculation, the present machine should be replaced when the costs per unit of output that can be assigned to the new machine - including the interest on any additional investment - are less than the total costs per unit of output that can be assigned or attributed to the use of the present machine.

The financial aspect of the decision hinges upon the availability and cost of the funds required to make the purchase of the new machine. It often happens that a small firm finds the purchase of a new machine is economically desirable but financially difficult, if not impossible.

ECONOMIC RATE OF DEPRECIATION

It is now appropriate to inquire into the rate at which the value of a depreciable asset declines or runs off over time. Accounting theory only requires that the original price less scrap value be allocated over the estimated service life of the asset. This dictum does not imply that straight line depreciation charges or any other "time-shape" for the erosion or run off of economic value is correct. Chart I-A pictures two well known methods of charging depreciation.

During the estimated five year service life of the assets, both the straight line method, (SL) and sum-of-the-years digits method (SYD) charge the same amount, the original or historical cost, against the revenue of the firm. Although the book value of the machine has a different time-shape under SYD as compared with SL, it is clear in Chart I-B that both curves reach zero (assuming no scrap value) at the same point on the time axis.

The use of SYD, DDB (the double-rate declining balance method), or any other method or combination of methods permitted under the 1954 Internal Revenue Code is not a departure from the dictates of accounting theory.

In the discussion thus far it has been assumed for analytical and expositional purposes that there are no price changes. The continuing controversy between businessmen, accountants, economists, and engineers with respect to charging depreciation on a current or historical basis cannot arise, therefore, under the assumptions being maintained. It has also been assumed that techniques remain unchanged so there can be no problem of obsolescence either. Therefore, the problem is reduced to the time-shape of the run

off of the values embodied in the depreciable assets.

The decision to use one method of depreciation rather than another should rest upon empirical evidence with respect to the time-shape of the depreciation curve or the book value curve. The authoritative studies of the Machinery and Allied Product Institute indicate strongly the depreciation follows a convex curve, a curve of the SYD type.

George Terborgh, Dynamic Equipment Policy, (Chicago: McGraw-Hill 1949); and George Terborgh, Realistic Depreciation Policy.

Chart I-A
Depreciation

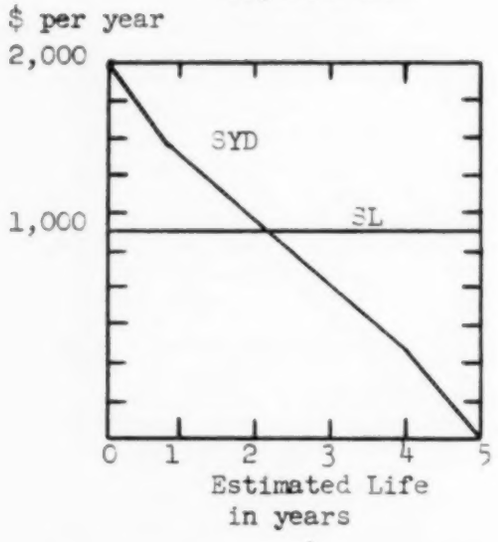
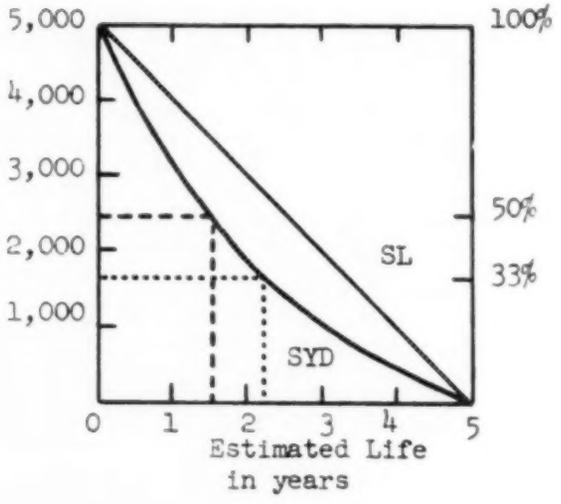


Chart I-B
Book Value
(Original Cost Less
Reserve for Depreciation)



A careful investigation of the market price for some types of used equipment indicates--abstracting from general changes in prices due to shortages such as those experienced after World War II and continuing increases in the price level--that about one-half of the value of an asset is used during the first third of the estimated life and that at least two-thirds of the value of an asset is used during the first half of the estimated life. It may be noted from Chart I-B that the SYD curve fits these conditions far better than the SL curve. Chart 2 reproduces Terborgh's Charts for the resale price of light trucks and medium trucks.

LOGICAL SUPPORT

There are also logical reasons to support these findings. When a machine or a piece of equipment is first put into use, there will be less "down time," less maintenance will be required, tolerances will be closer, the quality of the product will be higher, less rework will be necessary, and so on.

Terborgh shows that maintenance expense increases with the age of machines in his study, Realistic Depreciation Policy. Maintenance curves for a wide range of machinery and equipment in general use are shown.

In other words, the value of the contribution of the machine to the cost of the product is greater when the machine is first put into operation and the value of its contribution diminishes as the machine grows older. This follows because the allocation of original cost must be based upon the alternative cost of producing the same product with other equipment or by an entirely different technique.

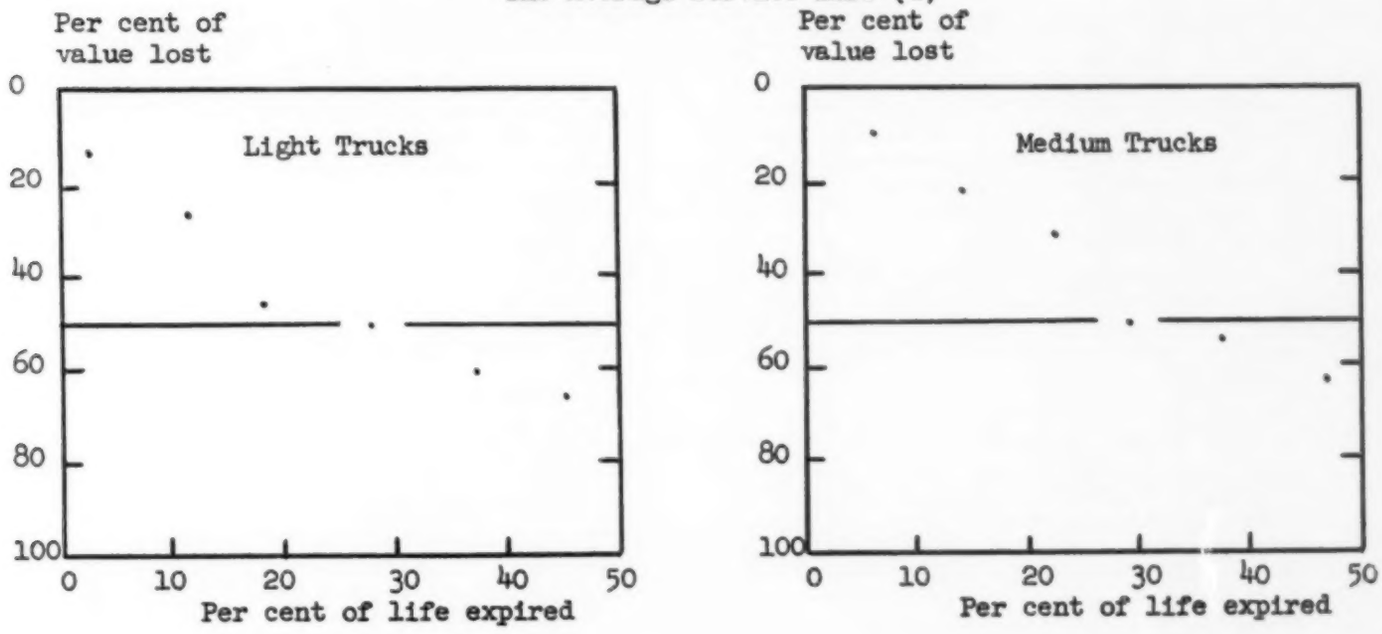
Of course, each type of depreciable asset has different characteristics and each asset will have its own pecularities. The statements made in the text assume that there is a norm for a large group of machines of each type. The three assumptions about conditions required to measure "pure" economic depreciation on p. 2 of this article should also be kept in mind.

Very often the use of the present machine is a substitute for the higher total cost of production carried on by means of an older machine. The total cost of using the older machine would be higher because of the additional maintenance, greater down-time, greater rework, and so forth. As the cycle continues and a new machine in its turn grows older, its contribution to the value of the product falls because more maintenance, more rework, and so forth are required to produce the same product.

These reasons lead to the conclusion that a larger proportion of the original cost should be charged off in the earlier part of the service life of the asset. The empirical studies referred to in the previous paragraph are further evidence of the time-shape that the depreciation charges should take if the accounting records are to mirror economic reality. Unless this is done, reported periodic net income is very likely to be distorted.

(a) George Terborgh, Realistic Depreciation Policy, (Chicago: 1954), p. 42

Chart 2
Decline of Resale Value Over First-Half of
The Average Service Life (a)



As the age of a piece of machinery or equipment increases, usually the maintenance expense will increase also. However, there is no necessary reason to expect that the sum of the depreciation and maintenance charges will be a constant periodic sum over the service life of the equipment. Furthermore, increased maintenance is only one of the costs that tends to increase as a machine grows older. The remaining economic value of a machine and anticipated maintenance are only two of the many items to be considered in the decision to replace one machine with another.

A discussion of replacement policy is beyond the scope of this discussion. A detailed system for making decisions with respect to replacement of assets is set forth in Dynamic Equipment Policy published by Machinery and Allied Products Institute. For a more general discussion of replacement policy, see Churchman, Ackoff, and Arnoff, Introduction to Operations Research, (New York: John Wiley and Sons, 1957), "Chapter 17, Replacement Models," pp. 481 to 561. This chapter in Operations Research also has an excellent bibliography on replacement policy.

DEPRECIATION UNDER THE 1954 INTERNAL REVENUE CODE

The 1954 Internal Revenue Code permits the use of straightline method of charging depreciation, the sum-of-the-years digits method, the double-rate declining balance method, or any other method that does not result in a larger annual depreciation charge than any of the permitted methods. The depreciation methods approved for tax purposes by the 1954 Code apply only to new assets newly acquired after December 31, 1953 that have an estimated life of three years or more. Many advantages were claimed for the new Code.

One of the more important is that the periodic depreciation charges permitted under the Code for tax purposes will approximate reality much more closely than the depreciation charges made under the straight-line method.

A second important advantage, one that has received more attention and that has been crucial in the decisions of most large businesses to adopt SYD of DDB, is the larger recovery of the original

outlay for the fixed asset at each point in the life of the asset. The larger depreciation charges taken in the earlier years of the life of the asset on the SYD as compared with SL method, decreases the net income before income taxes and the income taxes themselves. The lower level of income tax payments conserves cash. It is true that the net income before income taxes, income taxes, and tax payments will all be higher in the later years of the individual asset. However, if the firm has several depreciating assets of varying ages and replaces them at various times, the conservation of cash is maintained.

This is the point made at the beginning of this paper by the first response to the query, "Why charge depreciation?" In so far as the firm recovers more of its cash earlier, depreciation is a larger source of cash under SYD and DDB than under SL. Those individuals who stressed depreciation as a source of cash in response to the question, "Why charge depreciation," would also prefer SYD or DDB to SL.

A third advantage cited for SYD or DDB is that the after-tax return on assets is ten to fifteen per cent higher when the depreciation methods now permitted under the 1954 Code are used rather than SL.

It was the hope of those whc advocated the adoption of the depreciation methods permitted under the 1954 Code that it would also stimulate investments. This stimulation of investment would come about (1) because of the lower risk occurred in an investment if the cash outlay were recovered sooner, (2) because of the larger amount of cash available to the investors, and (3) because of the higher rate of return on the investment.

Reasons are also advanced for not adopting SYD or DDB. First, the income of the business will be reported as being lower. Second, the lower reported income may adversely affect the atittudes of the stockholders and creditors toward the business. Third, a lower level of reported net income may reduce the payments into executive bonus plans that are geared to net income. Fourth, if the tax rates rise, the higher profits in later periods will be taxed at a higher rate. Fifth, the added interest costs of obtaining the additional cash made available by postponing tax payments is not worth the risk of adopting SYD or DDB.

None of the reasons advanced for retaining SL make any reference at all to the time-shape of the original value of the depreciable assets. It is possible, of course, that income tax rates will rise, but if a constant or expanding stream of assets is maintained, the day that net income is higher because of using SYD or DDB rather than SL is never reached. Most large corporations are adopting SYD or DDB.

For example, in 1956, the Machinery and Allied Products Institution conducted a survey that covered the depreciation policies of 491 manufacturers of capital equipment. There was a 60 per cent response to the survey. The tabulations showed that 36 per cent of the respondents were still using SL; 31 per cent were using DDB; 31 per cent were using SYD; and 2 per cent were using other methods.
Equipment Replacement and Depreciation-Policies and Practices-A Survey, Machinery and Allied Products Institute, (Washington, 1956)

The amount of tax payments postponed or cash conserved by using SYD or DDB rather than SL is suprisingly large relative to the book value of the corresponding assets. Any source of additional cash is very important to most small businesses, especially if they are expanding. Finally, the cost of any additional money capital is best measured by the weighted average cost of the capitalization in terms of current prices.

CONCLUSION

The theoretical and empirical evidence indicates that the sum-of-the-years digits and double-rate declining balance methods of depreciation approximate economic reality more closely than straight-line depreciation.

The day to day view of observed depreciation is distorted by price movements and changes in technique. The use of the sum-of-the-years digits or double-rate declining balance method recovers the original cash outlay for the depreciable assets sooner. The cash recovered earlier by changing the pattern of tax payments is, in effect, an interest free source of funds as compared with the cash position when the straight-line method depreciation is followed. As long as the stream of assets is maintained, the cash advantage built up is retained. As long as the business unit continues to expand, the tax and cash advantages of either the sum-of-the-years and the double-rate declining balance method of depreciation will continue to grow as compared with the results of the straight-line method of depreciation.

It is fortunate that the better method of charging depreciation in almost all cases and the method that is also almost always advantageous for tax strategy coincide. If they did not coincide, it appears probable that with the high level of federal income taxes that the path of seeking out tax and cash advantages would be followed.

By: William G. Schmidt
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Who Pays Incentives Based on Budget Performance and Why?

OR WHY NOT?

This article represents the summation of a project of the Milwaukee NSBB Chapter, with Mr. Schmidt as the Focal Point, to determine the effective use of Budget Performance as a factor in the payment of incentives to supervisory personnel. It is, indeed, a worthy contribution to the advancement of the Science of Budgeting, and should act to crystallize our members thoughts, if they are considering incentive pay based on Budget Peformance.

We are all interested in making our budget programs more effective instruments of cost reduction, and more effective tools of management. We would, therefore, be interested in any concept that claims to offer these improvements. Frequently, however, these claims and counter-claims are based more on opinion than facts and the issues tend to become controversial. When this occurs, large samplings of opinion and experience are required to properly evaluate the issues.

In the Milwaukee Chapter, we felt this to be the case when considering the payment of incentives based on budget performance. We felt that a test of the overall thinking of a group such as our national society should be valuable in considering this subject.

A seven part questionnaire was, therefore, prepared and mailed to 426 members of N.S.B.B. These members were selected from the national roster after eliminating as far as possible all service organizations such as insurance companies, banks, public accounting firms, etc., and all but one member in the case of companies who had more than one member in the same chapter. We received 201 replies for a 45% return.

Returns were received from companies varying in size from 25 employees to 45,000 employees, the median company having 1,800 employees. The respondents have been grouped by size for purpose of this analysis and line up as follows:

Number of Employees	Number of Respondents
0-500	29
501-1000	41
1001-1500	21
1501-2000	20
2001-3000	20
3001-5000	21
5001-10,000	11
10,001-20,000	16
20,001-40,000	10
over 40,000	3
no indication	9

Following is an analysis of the replies received to the questionnaire. Except in the case where the question could be answered with a simple "Yes" or "No", no attempt has been made to analyze the replies quantitatively except in general terms. If a similar reply was received from more than one company within a category, it has been shown but once. We felt the reader would be more interested in the kind of replies received than in how many. The replies were edited but little and appear in the same language they were received.

Do you now pay incentives to supervision either factory or office, based on budget performance?

Replies based on the foregoing grouping were as follows:

0-500	1 yes	28 no
501-1000	6 yes	35 no
1001-1500	2 yes	19 no
1501-2000	3 yes	17 no
2001-3000	4 yes	16 no
3001-5000	3 yes	17 no
5001-10,000	1 yes	10 no
10,001-20,000	1 yes	15 no
20,001-40,000	2 yes	8 no
over 40,000	2 yes	1 no

The second question was:

If your answer to No. 1 is "Yes", do you feel it has contributed materially to the effectiveness of your budget program?

The replies to this question were:

0-500	1 yes	0 no
501-1000	5 yes	1 no
1001-1500	2 yes	0 no
1501-2000	3 yes	0 no
2001-3000	3 yes	1 qualified yes (just installed incentive system)
3001-5000	1 yes	0 no
5001-10,000	1 yes	0 no
10,001-20,000	1 yes	0 no
20,001-40,000	1 yes	1 no
over 40,000	2 yes	0 no

The third question asked:

If your answer to No. 2 is "Yes", briefly state in what way you feel it has.

In the 0-500 employee group, the one company paying incentives stated the plan was very new in their company but felt they were already obtaining more cost consciousness, more interest in departmental controls on time and material and quality production.

In the 501-1000 employee group five replied incentives contributed to the effectiveness of their program and one that it did not. Of the five, one stated they had just inaugurated the plan for the second time. They feel, however, that it failed the first time due to budget immaturity rather than lack of value in the plan.

A second company stated budget performance was one of several factors used in evaluating incentive pay in the form of an annual bonus.

The other three of the five were enthusiastic in their support. Typical comments were that incentives have significantly contributed to almost all aspects of labor utilization and expense control. A budget consciousness has been created which has such intangible benefits as better comprehension of reports and understanding of mutual objectives. This has created a greater feeling of responsibility. Identification of charges by account, department and production improved, actual dollar savings substantial.

The "No" was a qualified one in that the respondent stated their particular plan was not working out. In this plan, incentives were paid on direct labor efficiency and budget performance with direct labor efficiency carrying four times the weight of budget performance. Management, however, set the budgets at 90% of the previous years realization with pay off starting at 80% and this created a serious moral problem. A new plan was being formulated making budget performance only one of several factors.

Of the two "Yeses" in the 1001-1500 category, one was a profit sharing plan paid only to branch sales managers. The other paid incentives to all facets of supervision but not on budget performance.

In the 1501-2000 of the three "Yeses", one paid only to branch sales managers. The other two had similar plans on which incentives were paid, but not on budget performance only. It was one factor in a formula which included departmental waste, improvement in methods, labor turn-over, absenteeism, safety, and overtime. Attitude toward budget, they felt has greatly improved.

Four people responded "Yes" to this question in the 2001-3000 category. One stated they had just recently installed the system and it was too early to judge its effectiveness. Another said budget performance was one of several factors in the formula used to calculate incentive payment. A third stated that it was effective but did not state how, and the fourth said it contributed materially in that supervisors pay more attention to allowances and carefully scrutinize results. Faster action also takes place now to effect corrections of deviations.

In the 5001-10,000 category one respondent replied their supervisors have been stimulated to better cost control.

In the 10,001-20,000 category one respondent claimed more effectiveness but in his company, budget performance was one factor in several on which incentive is based.

In the 20,001-40,000 category one company said they had benefitted. Their statistics showed almost perfect correlation between cost reduction dollars originated by participating employees and incentive dollars disbursed per participating employee in plant by plant comparisons.

In this category there was one "No". This respondent doubted whether the effectiveness of their budget program was materially increased by incentives. He stated it had been made more complex. As the same people earning incentives

helped develop the budget. However, he did state that once established, the possibility of meeting budgets was improved.

In the over 40,000 category two of the three respondents were paying incentives and felt they were contributing to the effectiveness of the program. In one company factor supervision excluding Plant Managers were paid on a basis of performance against a budget for variable manufacturing costs and specific elements of fixed costs. It was considered effective from an operating standpoint and strengthened the program for improved cost control. The sales force had another plan and plant managers, divisional and head office department heads a third. The respondent felt their plan went a long way to "putting them (supervisors) in business" with rewards for initiation and good performance.

The second company in this category stated their budgets had shown marked improvement due to increased participation by all affected.

The fourth question asked on the questionnaire was:

If your answer to No. 1, No. 2 and No. 3 was "No", are you now considering the matter of paying incentives to supervision based on budget performance?

The replies here were as follows:

0-500	2 yes	24 no
501-1000	5 yes	30 no
1001-1500	1 yes	18 no
1501-2000	2 yes	15 no
2001-3000	2 yes	14 no
3001-5000	2 yes	15 no
5001-10,000	0 yes	10 no
10,001-20,000	0 yes	15 no
20,001-40,000	1 yes	7 no
over 40,000	0 yes	1 no

The fifth question was:

Have you ever in the past considered paying incentives to supervision based on budget performance?

The replies to this question were as follows:

0-500	7 yes	18 no
501-1000	8 yes	26 no
1001-1500	6 yes	14 no
1501-2000	2 yes	15 no
2001-3000	3 yes	13 no
3001-5000	4 yes	13 no
5001-10,000	1 yes	9 no
10,001-20,000	4 yes	11 no
20,001-40,000	2 yes	6 no
over 40,000	0 yes	1 no

The next question then asked was:

If you have considered paying incentives, and decided not to, please state why.

Typical comments made in answer to this question were the following: In the 0-500 employee group.

1. Idea is excellent, but unable to sell top management.
2. Insufficient experience in budget program prevents setting reliable standards.
3. Couldn't come up with a plan acceptable to both management and employee.
4. Couldn't develop satisfactory formula. Some cost centers had high degree of fixed and others very little.

From the 500-1000 employee group we get the following comments:

1. In one company many of the budgeted items were controlled by group effort rather than by individual supervisors.
2. Many other factors should be considered in evaluating effectiveness of supervision and these are not controlled by budgets.
3. Difficult and expensive to administer.
4. Possibility of production people hampering scheduled work in order to make favorable budget record.
5. Disagreements which would arise in setting and reviewing allowances.
6. Difficulty in removing fixed to arrive at true controllable.
7. Difficulty in developing a formula that is fair for all departments.
8. Budgets are plans which in themselves are not precise enough on which to base incentive pay.
9. Isolating factors over which supervision has substantial control.

In the 1000-1500 category these were typical replies:

1. Budget program too new.
2. Too many intangible factors involved to base incentives on an unqualified use of the dollar figure in budget performance.
3. Too narrow a base on which to judge supervision.
4. Management not convinced of its effectiveness.

The comments in the 1500-2000 category were:

1. Budget program not mature enough when it was considered. By the time this had been remedied a better plan had been installed (the ref-

erence was to the Scanlon Plan of plant wide incentive.)

2. Felt tying bonus to budget imparted greater importance to budget than it warranted as a management tool. They instead pay a bonus based on return on investment.

In the 2000-3000 category we received the following comments:

1. Has been under consideration for three to four years and several plans have been investigated. Rapid expansion has prevented installation.

2. Did pay incentives at one time, but results were not obtained so plan was dropped.

In the 3000-5000 category, these were the comments:

1. Budgeting and forecasting should be a friendly cooperative effort. When you mix in incentives it becomes a fighting session. Believe reward should be in salary for your supervisors.

2. Feel it should be a part of an overall formula including direct labor efficiency, production schedule performance, scrap and rework control, etc. in the case of shop supervision was considered the problem of weighing the factors between the two groups to their satisfaction was not solved. Still looking for a solution.

In the 5000-10,000 category we received this comment:

1. It was believed that too much pressure and temptation to pad budgets would be brought to bear. Felt that management has shown a sufficient interest to create interest on the part of shop supervision.

In the 10,000-20,000 category these were the comments:

1. Production workers paid hourly (Primarily a machine paced industry) so did not want to pay incentive to supervision.

2. Entire company on non-incentive basis because of poor experience in the past with centives and accompanying narrowing of middle management objectivity.

3. Further work delayed until direct labor standards are developed.

In the 20,000-40,000 category we received these comments:

1. Did not feel it was possible in most areas to develop standards sufficiently accurate to justify basing compensation on them.

2. In several studies they found the practical applications have been of such limited scope as to not warrant their adoption.

In the over 40,000 category no company had considered the question and then dropped it.

One company in the 10,000-20,000 employee category replied by letter instead of on the questionnaire because divisions within the company were operated differently. They had some divisions which pay direct incentives on a monthly basis based on budget performance and some that have no incentives. The matter is somewhat controversial within their company and is left to the discretion of Division Managers.

They have substantial evidence to the effect that incentives result in expenses being reduced faster than without incentives when budgets are first put into effect, but after the initial reductions have been made incentives are largely payments to hold ground already gained. This situation raised the somewhat delicate question as to when and to what extent budget rates can be reduced without arousing resentment among foremen.

In this company changes in methods and products were the rule rather than the exception and budget rates need to be revised fairly frequently. When direct incentives are involved, adjustments involved more complexities than when they are involved.

Although some of their divisions still favor incentives there is a trend away from direct incentives where they were used towards the idea of giving substantial weight to budget performance in previewing supervisory salaries every six months. A new plan taking into effect changing conditions is being developed but is too new to evaluate yet.

It was this respondents personal opinion that in his company at least, given the right kind of administration, budgets will be just as effective over the long pull without incentives as they will with incentives and the absence of direct incentives considerably simplifies administration.

In reviewing the foregoing, you will note that roughly 12 of the companies replying are now paying incentives and almost all of them feel it has contributed materially to the success of their program for the reasons shown. 7% of the companies indicated they were now considering the matter. 18% of the companies indicated they had in the past considered the matter and for various reasons did not adopt the plan.

The last question was in the nature of an opinion survey and read as follows:

If you have never considered paying incentives will you please state whether in your opinion it would increase budget performance or not, and why you think as you do?

As might be suspected the replies ran the gamut from enthusiastic acceptance of the idea to most emphatic rejection. Size apparently was

an influencing factor. The smaller companies, those below 250 employees, by and large rejected the idea because close top-side control in most phases of the business would prevent success. From there to the 1500 employee size there was considerable opinion for the idea, after which opinion became about equally divided. Beyond the 3000 employee size there was a more frequent rejection of the idea for philosophic reasons and a considerable number of companies making a qualified acceptance of the principle.

It would be impossible to summarize the opinions made into one statement. However, certain observations can be made based on opinions that appeared consistently throughout the opinion.

Most agreed that payment of incentives should improve budget performance, because to argue otherwise is to say financial reward is not an incentive. However, the majority felt it impossible, or too costly, to develop fair and equitable standards on which to base the incentive pay, or felt it administratively inadvisable to use budgets as an income determining device for supervision, rather than primarily as a management tool. They felt that budget performance alone was too narrow a base on which to base supervisory pay and would probably result in good expense control but poor administrative performance in areas as important or more important than expense control. There was also considerable agreement in the larger companies, those with more than 3000 employees, that payment of incentives to supervision was contrary to their management philosophy. A management team philosophy was stressed here with group or total effort directed toward higher profits and the reward to be gained in salary through periodic merit or salary reviews based on total performance.

On the other hand, there were a large number of respondents who felt that incentives paid supervision based on a formula embracing all supervisory functions including budgets, would be valuable, particularly in shop supervision. Other factors mentioned to be included in the formula were direct labor efficiency, schedule maintenance, rejects and rework, turnover, absenteeism, safety, good housekeeping, etc.

Generally, the foregoing reflects the thinking of N.S.B.B. on the matter of incentive pay based on budget performance. Although the concept has not been wisely adopted, it is evident from the replies that a considerable amount of thought has been given the object. Judging from the divergence of opinion, some interesting and spirited debates have taken place or in time will take place.

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By: John A. Beckett
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THE ESSENCE OF DIRECT COSTING

While not directly a budgeting subject, this article contains an appraisal of Direct Costing, and offers a challenge to budget men to review their current conceptions of stating costs. Direct costing should find relatively easy acceptance by budget men, as one of its preconceptions involves a knowledge of the fixed overhead expense, and who but a budget man is in a better postion to determine this separation. Of particular value, of course, is the value of the system as an assist to "break-even" analysis and control by budgeting.

For a good many years now the term "Direct Costing" has been tossed about in business circles--mostly by accountants. A fair amount has appeared in the literature of business, too, but here again most of this literature has been of the type that accountants write to one another--the literature of their professional organizations.

Yet what they are talking about affects the business manager and, you might say, the non-accountant type of business manager in particular. It might be well if he tried to understand what it is they are saying. He is the one they mean to be talking to!

Like "Operations Research", the term "Direct Costing" has the aura of built-in mystery about it. Further, the name itself gives to most non-accountants (and some accountants, too) the feeling that here is a technical matter which is not likely to rock the world of reality, or be of much consequence to the average fellow who's just trying to run his business with what little he knows.

But by whatever name you give them, the ideas behind "Direct Costing" are progressive and searching. This little effort is an attempt to present those ideas in their simplest form.

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More and more companies are changing their accounting practices to conform to the principles of Direct Costing. The companies which are not changing may be grouped as follows:

1. Those whose managers have carefully studied the idea and its potential application to their business, and have decided against it.

2. Those whose managers do not yet fully understand what Direct Costing is and thus do not know whether or not it has any advantages to them or applicability to their businesses.

A recent study conducted by the Research Department of the Controllers Institute of America indicates clearly that there are a great many companies in the second group--those who have not yet grasped what Direct Costing is all about. That indication is supported by the experience of those of us who have occasion to visit with managers in many walks of industrial life.

Let's take the wraps of complexity off the subject and see if some in the second group can find some advantage from the quite simple ideas that are Direct Costing.

Here is the framework for understanding the subject:

I. Some confusing things about conventional accounting
II. The source of the confusion
III. How Direct Costing removes the confusion
IV. Some secondary benefits of Direct Costing
V. How to convert to Direct Costing

I. The first reason for thinking about Direct Costing is because there is something confusing about conventional accounting, particularly to the non-accountant. This is what it is:

The conventions of accounting make it possible for the Report of Earnings to show variations in profit which are solely the result of fluctuations in volume of production

Here is an example:

	January	February
Sales	$ 10,000	$ 10,000
Less: Cost of Sales:		
At standard including fixed overhead	6,000	6,000
Variance loss or gain	200	(200)
Total cost of sales	6,200	5,800
Gross profit	3,800	4,200
Less: Selling and administrative expense	2,000	2,000
Profit before taxes	$ 1,800	$ 2,200

And, of course, the influence of this distorition may also be present when sales are different.

II. Why is this? Clearly the so-called "variance loss or gain" made the difference, but what is it?

Here is what it is:

Variance loss – Example No. 1

Overhead – Month of January – Department A

Planned production	1,000 pieces
Planned fixed overhead expense	$1,000
Standard fixed overhead expense per unit	$1

******

Actual production	800 pieces
Actual fixed overhead expense	$1,000

******

Charged to inventory 800 pieces x $1.00	$ 800

******

Variance loss

Charged to expense (cost of sales)	$ 200

Variance gain – Example No. 2

Overhead – Month of February – Department A

Planned production	1,000 pieces
Planned fixed overhead expense	$1,000
Standard fixed overhead expense per unit	$1

******

Actual production	1,200 pieces
Actual fixed overhead expense	$1,000

******

Charged to inventory	$1,200

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Variance gain

Credited to expense (cost of sales)	$(200)

What does this mean? It means that it is very difficult to assign the continuing (fixed) factory overhead expenses to the number of units which are being produced each month if the volume of production varies or if the estimate was not very good in the first place. But it also means that the traditions of accounting permit a treatment in which the amount by which the estimate was wrong can be charged against or credited to the earnings for the month (or other period) in which it was found to be wrong.

III. There has developed a significant body of accounting opinion that all the effort to assign continuing factory overhead costs to products as they are produced is perhaps not so necessary after all. Maybe the fixed factory expenses ought not to be attached to the products being made, as part of their cost.

Here is the reasoning:

1. The process of assigning fixed factory overhead costs to products does not accomplish anything from the standpoint of cost control. In fact, prorating the fixed factory overhead expenses to products may obscure the picture of both (a) the cost of the products and (b) the amount of the fixed factory overhead.

2. If they are kept separate--that is, in groups which reflect their normal behavior as (a) fixed expenses or (b) variable product costs--it is likely, they say, that it will be easier to control both.

3. Furthermore, the process certainly does not give a true and reliable picture of total manufacturing cost, when it is added on to the product costs of material, labor, and other costs which increase or decrease in direct proportion with the number of units made. By the very definition of the type of expense which it is--fixed factory expense--it is unrelated to the volume of production; and fluctuations in that volume of production, or any production volumes which are different from the amount of production planned or estimated will most certainly cast doubt on the truth and reliability of such data as "true costs of the products" that are being made.

4. Since that is so, it may not even be realistic to look upon "total costs", so constructed, as reliable guides when it comes to considering pricing matters. If fixed overhead expenses constitute a significantly large part of total product cost--as is the case to a greater and greater extent as automation of industry increases--then total fixed cost component of product cost gains more and more leverage for distortion.

5. Finally, since continuing overhead expenses in the factory are expenses that accure primarily only as a function of the amount of time that passes, rather than on the basis of the number of units of product that happen to be made in any one period, it might just be that such expenses could better be considered as expenses of the period rather than costs of the product when it comes to measuring how much money has been made in any particular period of time.

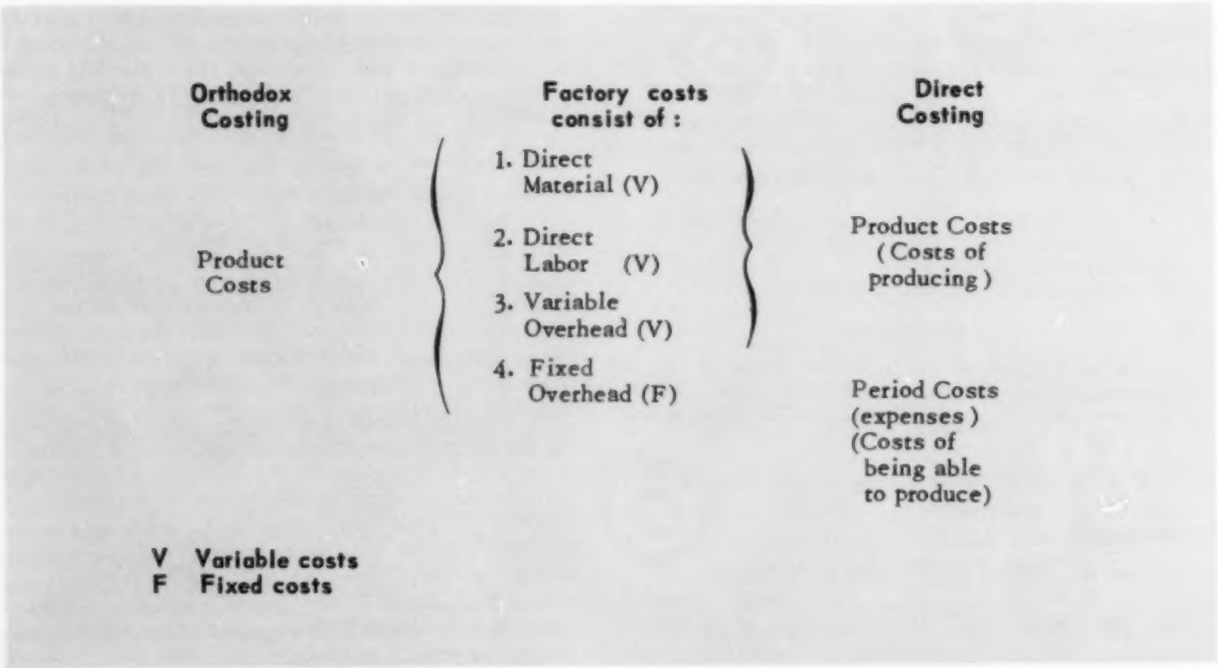
Those are the principal reasons for thinking that maybe continuing overhead expenses need not be prorated to products in some manner and in a regular routine. The traditional method does not enhance cost control, may be unreliable and misleading for pricing purposes, and subject to logical challenge when used for profit measurement purposes as well.

With fixed factory expenses no longer assigned to products, the confusion illustrated earlier is removed, and the earnings reports for the two months appear as follows:

	January	February
Sales	$ 10,000	$ 10,000
Less: Cost of Sales: At standard excluding fixed overhead	5,000	5,000
Gross profit	5,000	5,000
Less: Expenses:		
Selling and administrative	2,000	2,000
Fixed manufacturing overhead	1,000	1,000
Total	3,000	3,000
Profit before taxes	$ 2,000	$ 2,000

This, then, is the immediate and most obvious result of adopting Direct Costing.

In short, the contrast between traditional accounting and Direct Costing is simply this:



With this background we may list the advantages of Direct Costing as follows.

1. Clarifies the Earnings Statement (Profit and Loss Statement)
   (a) Removes the variances resulting from over-absorption and underabsorption of fixed overhead cost.

2. Facilitates "responsibility accounting" and budgeting.
   (a) Permits measurement and control of costs which increase and decrease as production increases and decreases.
   (b) Permits isolation of continuing factory costs for appraisal and control.

3. Improves product costs.
   (a) Necessity of routine assignment of continuing factory overhead expense to products is removed, thus removing arbitrary and sometimes inaccurate assignment of such expense to products.
   (b) Costs which are unequivocably costs of the products--those which increase and decrease with variations in volume of production--are the only ones which are assigned to products.

IV. With Direct Costs as a base, it is now easy to make a somewhat more revealing analysis of product line profitability than was customary under the conventional accounting practices. Here is the way that analysis is made:

	A	B	C	D	E
Selling price	$3.00	$3.00	$6.00	$6.00	$1.00
Direct cost	1.00	2.00	4.00	2.00	.50
Unit contribution	$2.00	$1.00	$2.00	$4.00	$ .50
Number sold	5,000	10,000	3,000	3,000	50,000
Total contribution	$10,000	$10,000	$6,000	$12,000	$25,000
Less: fixed expenses					
Occupancy –	1,000	2,000	2,000	2,000	1,500
Protection	300	1,000	500	800	700
Maintenance	4,000	3,000	600	2,000	3,000
Depreciation	900	2,000	900	1,500	1,300
Other	1,100	2,000	500	1,300	400
Total	7,300	10,000	4,500	7,600	6,900
Contribution to other fixed expenses and to profit	$ 2,700	$ 0	$ 1,500	$ 4,400	$ 18,100

This type of analysis not only tells something about the relative profitability of products or product groups in the past, but also provides a picture--better than has generally been provided by conventional accounting--of what would happen if product mix were to change, or if sales were to increase or decrease significantly. That is, it gives not only a picture of the past, but a basis for studying the profit effect of certain alternatives that may lie in the future.

V. Converting to Direct Costing requires:

1. General management understanding and acceptance of the points that have been made above.
2. Elimination of the fixed overhead component from unit product cost records.
3. Slight rearrangement of the Report of Earnings.

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These are the essential points of Direct Costing. They tell the essentials only, of course, but in this form they have helped to increase the number of management people who understand the essence of Direct Costing and its applicability to their businesses.

EXCERPTS FROM CHAPTER NEWSLETTER

H. G. MEYER, Newsletter Chairman of North Jersey Chapter reported the following summary of a chapter talk in an issue of their chapter newsletter – GEORGE D. WILSON, Chairman of the Program Committee, introduced the speaker of the evening, MR. G. F. MUELLER, Manager of Sales Research for the National Biscuit Company. Mr. Mueller's topic was "Sales Forecasting – The First Step in Business Planning." Following are a few excerpts from Mr. Mueller's presentation:

Business enterprises have probably always made some sort of sales forecast, but it has only been in recent years that formal forecasting of sales has found a niche in the operation of many large companies.

An annual forecasting program is invaluable in the development of sound marketing strategy, and it provides the means of adjusting a program to a more profitable basis while there is still time to do something about it.

Accurate estimates of the size of the market and the prospects of expanding the market with specific promotional activities are essential to the formulation of sound marketing strategy. Companies must be able to reasonably estimate what can be accomplished sales-wise in relation to any planned level of marketing activity.

The use of an index composed of population and disposable income is desirable in order to project total sales of a specific industry, and from that to develop total company sales of our specific products.

Probably one of the greatest errors that could be made in forecasting is to accept individual product estimates or divisional estimates and add them up to a total without consideration to overall conditions in the industry or the state of business in general.

Lost in the shuffle is the fact that consumers will spend just so much on the product of a given industry --- and if careful planning is carried out, it could improve a given company's share of the industry's gross sales.

In April of each year, Nabisco's people start working on a tentative sales forecast for the next calendar years with a review of economic trends and what the economists are saying of the future.

In the meantime, the Product Managers are preparing estimates for each of some 400 products and the total of all these is matched with the figure which has been developed by Sales Research

The Budget people pass the forecast along to all Departments of the Company, who estimate the cost of producing and distributing that volume.

The budget is then submitted to the Board of Directors for consideration. This is the tentative sales forecast and by August 1st, it is determined whether or not the estimated volume will produce a reasonable profit.

The final forecast is then prepared and keyed in with advertising and promotional plans for the coming year and a more current review of trends in the national economy.

In this forecast, each Sales Manager is asked to submit a forecast for the coming year. Economic and Sales trends in his area for the past five years are prepared and projected through the forecast year. Thus, each Sales Manager obtains an estimate of what total sales should be in his area.

NOTICE

TO ALL MEMBERS

The Nominating Committee is getting ready to make its selections to present to the Membership in April.

A new President will take the helm of the Society July 1st, with a new First Vice President, a Secretary, a Treasurer, and three new Directors. Two of the Directors will be elected for three year terms, and one, who will represent the Members-at-Large for a one year term.

The retiring Directors are W. D. McGuire, Past President, C. P. Reynolds, Jr., Cincinnati Chapter, B. W. Schaller, Twin Cities Chapter and L. G. Hawkins, representing the Members-at-Large.

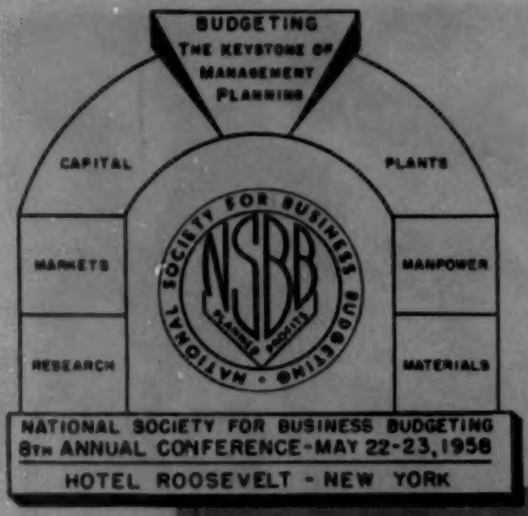
Other Directors, who will continue to serve the Society are the retiring President, C. H. Eckelkamp, New York Chapter as Past President; D. E. Bacon, Chicago Chapter and R. V. Millar, Philadelphia Chapter until 6/30/59; A. D. Moor, San Francisco Chapter and C. O. Wessman, Cleveland Chapter until 6/30/60.

The Nominating Committee, appointed by the Board of Directors, consists of:

Wm. D. McGuire, Chairman Kimberly-Clark Corp. Lake Street Neenah, Wisconsin	1956-1957 President, Member of the Milwaukee Chapter, Member of the Executive Committee
E. G. Mauck Eli Lilly & Co. 740 South Alabama Street Indianapolis 6, Ind.	1955-56 President, Member of the Indianapolis Chapter
Harry P. Kelly American Viscose Corp. 1617 Pennsylvania Blvd. Philadelphia 3, Pa.	1954-1955 President, Member of the Philadelphia Chapter
Leslie G. Hawkins Los Alamos Scientific Laboratory University of California Los Alamos, New Mexico	A Director-at-Large Representing the Members-at-Large

This Committee will welcome proposals from the Membership for their slate. They should be sent directly to any of the Committee Members.

In addition to the Nominating Committee's selections, nominations may also be made directly by members, Article X, Section 2, Sub-section (B), of the Society By-Laws reads, "Nominations may be made in writing signed by ten members, or by the Nominating Committee appointed by the Board of Directors." Mail such nominations directly from Members to: Melvin C. Aichholz, Administrative Secretary, National Society for Business Budgeting, P. O. Box 1, Covington, Ky., no later than April 12, 1958 to be included in the official ballot mailed to the membership.



1958 NATIONAL CONFERENCE COMMITTEE

Left to Right (Seated)

W. J. EDMONDS	Standard Oil Co. (N.J.)	GENERAL CONFERENCE CHAIRMAN
K. A. OLSEN	IBM Corporation	CONFERENCE SECRETARY
R. R. SERENBETZ	Vick Chemical Co.	ARRANGEMENT CHAIRMAN
J. L. SELKOWITZ	R. H. Macy & Co.	PUBLICITY CHAIRMAN

Left to Right (Standing)

F. M. EISNER	Weiss & Klau Co.	ATTENDANCE COMMITTEE MEMBER
O. H. MELAUGH	Continental Can Co. Inc.	PROGRAM CHAIRMAN
H. STRINGHAM	American Smelting & Refining Co.	ATTENDANCE CHAIRMAN

Not Present

W. H. HARR	Lever Brothers Co.	RECEPTION CHAIRMAN
E. W. KITTEL	American Machine & Foundry Co.	FINANCE CHAIRMAN

PLAN NOW TO ATTEND
NEW YORK - MAY 22-23, 1958